

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau(43) International Publication Date  
3 June 2004 (03.06.2004)

PCT

(10) International Publication Number  
**WO 2004/046129 A3**(51) International Patent Classification<sup>7</sup>: **C07D 401/04**,  
A01N 43/56(21) International Application Number:  
PCT/US2003/036167(22) International Filing Date:  
12 November 2003 (12.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/426,693 15 November 2002 (15.11.2002) US(71) Applicant (for all designated States except US): **E.I. DU  
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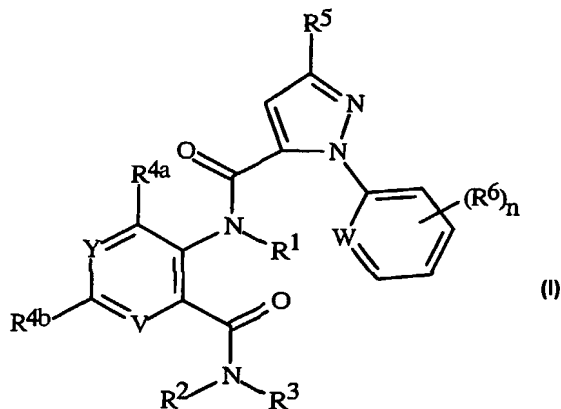
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DE 19805 (US).(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC,  
SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA,  
UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).**Published:**

- with international search report
- before the expiration of the time limit for amending the  
claims and to be republished in the event of receipt of  
amendments

(88) Date of publication of the international search report:  
15 July 2004For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.

(54) Title: NOVEL ANTHRANILAMIDE INSECTICIDES



(I)

(57) **Abstract:** This invention provides compounds of Formula I, *N*-oxides and suitable salts thereof (INSERT FORMULA I HERE) wherein Y and V are each independently N or CR<sub>4a</sub>; W is N, CH or CR<sub>6</sub>; and R<sub>1</sub> through R<sub>6</sub>, and n are as defined in the disclosure. This invention also pertains to a composition for controlling an invertebrate pest comprising a biologically effective amount of a compound of Formula I, an *N*-oxide thereof or an agronomic or nonagronomic suitable salt of the compound and at least one additional component selected from the group consisting of a surfactant, a solid diluent and a liquid diluent, and optionally further comprising an effective amount of at least one additional biologically active compound or agent. Also disclosed are methods for controlling an invertebrate pest comprising contacting the invertebrate pest or its environment with a biologically effective amount of a compound of Formula I, an *N*-oxide thereof or an agronomic or nonagronomic suitable salt of the compound or with the composition described herein.

## INTERNATIONAL SEARCH REPORT

International Application No.

/US 03/36167

A. CLASSIFICATION OF SUBJECT MATTER  
 IPC 7 C07D401/04 A01N43/56

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07D A01N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03/015518 A (SELBY THOMAS PAUL ; STEVENSON THOMAS MARTIN (US); DU PONT (US); LAH) 27 February 2003 (2003-02-27) the whole document	1-15
P,X	WO 03/024222 A (BERGER RICHARD ALAN ;DU PONT (US); FLEXNER JOHN LINDSEY (US)) 27 March 2003 (2003-03-27) the whole document	1-15
E	WO 03/106427 A (PASTERIS ROBERT JAMES ; STEVENSON THOMAS MARTIN (US); DU PONT (US);) 24 December 2003 (2003-12-24) the whole document	1-15
P,A	WO 02/094791 A (DU PONT ;CLARK DAVID ALAN (US)) 28 November 2002 (2002-11-28) claims 1-14; examples 1,2; tables 1-9	1-15
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Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the international search

11 May 2004

Date of mailing of the international search report

02/06/2004

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No.

US 03/36167

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	WO 03/015519 A (SELBY THOMAS PAUL ; STEVENSON THOMAS MARTIN (US); DU PONT (US); LAH) 27 February 2003 (2003-02-27) the whole document ----	1-15
P,X	WO 03/016282 A (SELBY THOMAS PAUL ; STEVENSON THOMAS MARTIN (US); DU PONT (US); ANN) 27 February 2003 (2003-02-27) page 3, line 13 - page 3, line 15 page 17, line 4 -page 19, line 8; claim 35 ----	1-15
P,X	WO 03/016283 A (SELBY THOMAS PAUL ; STEVENSON THOMAS MARTIN (US); DU PONT (US); FRE) 27 February 2003 (2003-02-27) page 3, line 8 - page 3, line 9 page 27, line 4 -page 29, line 7; claim 22 ----	1-15
P,X	WO 03/016284 A (STEVENSON THOMAS MARTIN ; DU PONT (US); SONG YING (US); FINKELSTEIN) 27 February 2003 (2003-02-27) the whole document ----	1-15
X	WO 01/70761 A (FLOWERS ROBERT A II ;UNIV TOLEDO (US); SUMMERS CATHERINE ANNE (US)) 27 September 2001 (2001-09-27) cited in the application claims 1-43; tables 9,,D,E the whole document ----	1-15
X	WO 02/070483 A (DU PONT ;ANIS GARY DAVID (US); FINKELSTEIN BRUCE LAWRENCE (US)) 12 September 2002 (2002-09-12) the whole document claims 1-26; example 5; tables 17,20-23 ----	1-15
A	EP 0 287 851 A (BAYER AG) 26 October 1988 (1988-10-26) the whole document -----	1-15

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

/US 03/36167

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 03015518	A	27-02-2003	CA 2454298 A1	27-02-2003
			CA 2454302 A1	27-02-2003
			CA 2454306 A1	27-02-2003
			CA 2454485 A1	27-02-2003
			WO 03016282 A2	27-02-2003
			WO 03015518 A1	27-02-2003
			WO 03016283 A1	27-02-2003
			WO 03015519 A1	27-02-2003
WO 03024222	A	27-03-2003	WO 03024222 A1	27-03-2003
WO 03106427	A	24-12-2003	WO 03106427 A2	24-12-2003
WO 02094791	A	28-11-2002	BR 0209912 A	06-04-2004
			EP 1389190 A1	18-02-2004
			WO 02094791 A1	28-11-2002
WO 03015519	A	27-02-2003	CA 2454298 A1	27-02-2003
			CA 2454302 A1	27-02-2003
			CA 2454306 A1	27-02-2003
			CA 2454485 A1	27-02-2003
			WO 03016282 A2	27-02-2003
			WO 03015518 A1	27-02-2003
			WO 03016283 A1	27-02-2003
			WO 03015519 A1	27-02-2003
WO 03016282	A	27-02-2003	CA 2454298 A1	27-02-2003
			CA 2454302 A1	27-02-2003
			CA 2454306 A1	27-02-2003
			CA 2454485 A1	27-02-2003
			WO 03016282 A2	27-02-2003
			WO 03015518 A1	27-02-2003
			WO 03016283 A1	27-02-2003
			WO 03015519 A1	27-02-2003
WO 03016283	A	27-02-2003	CA 2454298 A1	27-02-2003
			CA 2454302 A1	27-02-2003
			CA 2454306 A1	27-02-2003
			CA 2454485 A1	27-02-2003
			WO 03016282 A2	27-02-2003
			WO 03015518 A1	27-02-2003
			WO 03016283 A1	27-02-2003
			WO 03015519 A1	27-02-2003
WO 03016284	A	27-02-2003	WO 03016284 A1	27-02-2003
WO 0170761	A	27-09-2001	WO 0170761 A1	27-09-2001
WO 02070483	A	12-09-2002	BR 0207996 A	02-03-2004
			CA 2437840 A1	12-09-2002
			EP 1373210 A1	02-01-2004
			HU 0303183 A2	29-12-2003
			WO 02070483 A1	12-09-2002
EP 0287851	A	26-10-1988	DE 3711928 A1	20-10-1988
			EP 0287851 A1	26-10-1988
			JP 63258859 A	26-10-1988